St Joseph's School
El Obour

Science Department

4th Primary
1st term

Our Solar System

Name: ……………………………………

Class: ……………………………………



Unit one

Sheet on lesson (1)

Measuring tools

Write the scientific term:

1. Everything occupies a space and has a mass. (........................)
2. The unit of measuring volume of solids objects. (........................)
3. Measuring unit of liquids volume. (........................)
4. The amount of matter in an object. (........................)

Complete:

1. The mass of the body is measured by..............................
2. ....is the space occupied by a matter.
3. There are.................grams in one kilogram.
4. All matter are similar to each other in occupying a .... and this means that they have ....
5. The length of a table is measured by using ....or ....
6. The mass of a ring made of gold is measured by using ....and its unit is.................................

Give reason:

1. Air is a matter.

....



Correct the under lined words:

1. The volume of a piece of rock is measured by a ruler.
2. Equal volumes of different substances have similar masses.
3. The length of an object is measured by common balance.
4. Cuboid whose length is 4cm, width is3cm and height is 2cm, and then its volume is 48 cm^3.

What is the meant by?

1. Matter: ....
2. Mass: ....
3. Volume: ....

Mention one function for the following:

1.Common balance: ....

....

2.Sensitivebalance: ....

....

3.Graduatedtape: ....

....

4.Graduated cylinder: ....

....



A measuring cylinder contains 60 cm^3 of water, when we put a piece of iron, the volume of water changed to 110 cm^3, what is the volume of the piece of iron?

....

....

When you put a small ball in a beaker that is completely filled with water, a quantity of 40 cm^3 of water is poured out. What is the volume of the ball?

....

....

Sheet on lesson (2)

States of matter and their changes

Complete:

1. The three states of matter are…………… , ……………..and………….

2. ………………have definite shape and volume.

3. When freezing water, it changes from…………state into……….state.

4. On decreasing the temperature of water vapour, it……………………..

5. The definite volume and indefinite shape exists in the…………state.

Give reason:

1. Wood has a definite shape and volume.

………

………

2. Water takes the shape of its container.

………

………

3. The shape of copper piece doesn't change when it is transferred from a container to another.

………

………

Write the scientific term:

1- A substance that has indefinite shape and volume. (…………..)

2- The change of matter from the gaseous state into the liquid state by cooling. (…………………)

3- The change of matter from the solid state into the liquid state by heating. (…………………)

4- The change of water into ice by cooling. (…………………)



Correct the underlined words:

1. Water is in <u>gaseous</u> state.

2. <u>Evaporation</u> is the change of matter from the liquid state into the solid state.

3. <u>Gaseous</u> state has a definite shape and volume.

Compare between:

1. Melting and freezing.

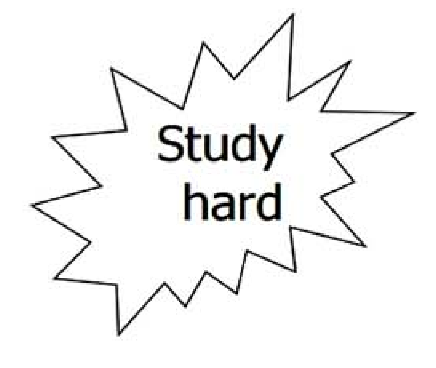
Melting	Freezing.
....	....
....	....
....	....
....	....
....	....

2. The three states of matter.

Solid	Liquid	Gas
....	....	....
....	....	....
....	....	....
....	....	....
....	....	....
....	....	....

3. Condensation and evaporation.

Condensation	Evaporation
....	....
....	....
....	....
....	....
....	....





Sheet on lesson (3)

Elements around us

Write the scientific term:

1. A liquid non-metal. (..................)
2. It is the simplest form of matter that cannot be decomposed into two substances or more. (......................)
3. It is non-metal but good conductor of electricity. (.................)
4. Elements that have metallic luster and high melting points. (..........)
5. The building unit of matter. (..................)
6. Elements that cannot be bend or pulled into shapes of wire. (................)
7. A non-metal used in making positive pole of the dry cell. (....................)

Complete:

1. Elements are classified into..................and...................
2. ....is a metal but....................is a non-metal.
3. Group of...............has luster while the group of...........doesn't have.
4. Iron has ....melting point while sulphur has ....melting point.
5. All non metals are ....conductors of ....and............ except.............
6. Cooking pans are made of ....,while the electrodes of batteries are made of ....
7. Aluminum is a ...., while carbon is a.................
8. Metals are ....at ordinary temperature except ....
9. ....is a liquid metal while ....is a liquid non –metal
10. Metals have ....melting point, while non-metals have .... melting point.
11. Copper is used in the manufacture of ...., ... and ....
12. Graphite is a form of a ....element. It is good conductor of............and it is used in making ....of the dry cell.
13. A liquid non-metal is.......... but a liquid metal.................
14. A liquid non-metal ....and while solid non-metal.........and.........

Give reason:

1. Cooking pots and pans are made of aluminum but their handles are made of plastic or wood.

....

....

2. Electric wires are made of copper and aluminum.

....

....

3. Carbon is used in the manufacture of electrodes of dry cells.

....

....

4. Carbon is an element.

....

....

5. Sulphur is considered as non–metal.

....

....

6. Copper is used making statues and metallic coins.

....

....

What happens if?

1. If we heat an iron nail and a piece of sulphur for the same time.

....

....

2. If you connect a piece of coal with a circuit that has a lighted lamp.

....

....



3. If the handles of cooking pots are made of copper.

....

....

4. If we try to shape some sulphur crystals.

....

....

Sheet on lesson (4)

Physical and chemical changes

Complete:

1. Burning of sugar is a……………….change but grinding of sugar is a………...change.

2. Breaking of chalk is a…………………..change.

3. The two kinds of changes that may occur to matter are……………change and……………..change.

4. The…………….change is a change in the shape or the appearance of matter only.

5. Iron rusts when it exposed to …………………and…………………

Give reasons for:

1. Melting of wax is a physical change.

……………………………………………………………………………………………………

……………………………………………………………………………………

2. Iron rust is a chemical change.

……………………………………………………………………………………………………

……………………………………………………………………………………

3. Sugar keeps its flavor after dissolving it in water.

……………………………………………………………………………………………………

……………………………………………………………………………………

4. Formation of clouds and rains is a physical change.

……………………………………………………………………………………………………

……………………………………………………………………………………

Write the scientific term:

1. A change of matter in shape and structure producing new substance with new properties. (………………………)
2. A change of matter in shape only without change in the structure. (……………………)
3. It is a change when wax melts. (……………………)
4. It is a change when yoghurt produced from milk. (…………………)
5. A chemical change which occurs to iron if we left it exposed to water and oxygen. (…………………………)

Compare between:

1. Grinding of salt and burning of paper.

Grinding of salt	burning of paper
………………………………………	………………………………………
………………………………………	………………………………………
………………………………………	………………………………………
………………………………………	………………………………………
………………………………………	………………………………………

2. Chemical and physical changes.

Chemical change	Physical change
………………………………………	………………………………………
………………………………………	………………………………………
………………………………………	………………………………………
………………………………………	………………………………………
………………………………………	………………………………………



Put ☑or ☒and then correct the wrong one:

1. The combustion of sugar is a chemical change. (   )

2. Dissolving table salt in water is a physical change. (   )

3. Making a chair from wood is a chemical change. (   )

4. Burning of a candle is a physical change. (   )

What happens if?

1. We heat a piece of ice strongly.

....

....

2. Adding yeast to pastry, then baking it.

....

....

3. A bright shiny iron nail is moistened and exposed to air.

....

....

What is meant by?

1. A physical change: ....

....

2.A chemical change: ....

....



Unit 2

Sheet on lesson (1)

Stars and planets

Complete:

1- The closest planet to sun is...........but the furthest planet to sun is..........

2- Stars are.............bodies but planets are................bodies.

3- The red planet is.......................but the blue planet is....................

4- The biggest planet is.......................but the smallest planet is..............

5- The most beautiful planet is..................

6- The sun radiates ....and..............

7- The sun is a ...., while Jupiter is a ....

8- Moons follow the ...., while the planets revolve around the ....

9- The Moon shines because it .... sunlight.

Give reasons for:

1- Sun is a star but Mars is a planet.

....

....

2- Stars appear small in size.

....

....

3- We see Sun bigger than the other stars.

....

....

4- The moon is a dark body but we see it shining.

....

....

5- Mercury is very hot, while Uranus is very cold.

....

....

Write the scientific term:

1- It consists of sun, planets, moons and other celestial bodies. (....................)

2- Dark bodies revolve around the sun in fixed orbits. (......................)

3- Dark object revolves around the sun and we live on it. (.................)

4- The largest body in the solar system. (.........................)

5- The area where all the solar system floats. (.........................)

6- They are the followers of some planets that revolve around them. (............................)

7- The farthest planet from earth. (......................)

Put (√) or (x):

1- The sun is a planet. ( )

2- Neptune has rings around it. ( )

3- The Moon emits light. ( )

Compare between:

Stars, planets and moons.

Stars	planets	Moons
....	....	....

Sheet on lesson (2)

Movement of sun and Earth

Complete:

1. The movement of shadow is due to……………………………………

2. Sequence of day and night is due to rotation of Earth around……………….

3. Sequence of four seasons is due to rotation of Earth around…………..

4. Earth revolves around the sun once each ……………….days.

5. Earth rotates around its axis once each……………..hours.

6. The earth rotates around…………….and …………………..

7. The axis of Earth is………………..

8. The rotation of the earth around its axis result in…………………

9. The day in the ………….season is longer than the day in the …………….

10. The number of day hours are not equal to the number of night hours, because the…………………of the Earth is …………………….

Give reasons for:

1. Sequence of four seasons.

……

……

2. Sequence of day and night.

……

……

3. Daytime in summer season is longer than daytime in winter season.

……

……

4. The hours of the day are not equal to the hours of night.

……

……



5. The apparent movement of the sun.

....

....

Choose the correct answer:

1. Night is longer than day in ....season.

a) Summer b) winter c) autumn

2. Day hours=night hours in.........................seasons.

a) Spring and autumn b) spring and winter c) autumn and summer

3. Sequence of day and time is due to the rotation of Earth around.................

a) The moon b) the sun c) its axis

4. The apparent movement of the sun means ....

a. The sun revolves around itself.
b. The earth revolves around its axis.
c. The earth revolves around planets.

5. The change in the position of shadow of an object during the day occurs due to ....

a. Rotation of the sun around the earth.
b. Rotation of the sun around its axis.
c. Rotation of the earth around its axis.

6. The inclination of the earth's axis causes ....

a. Sequence of day and night.
b. Sequence of four seasons.
c. The hours of day are not equal to the hours of night.

What happens if?

1. Earth's axis is in a vertical position.

....

....

2. Earth's axis is in a tilted position.

....

....

3. The earth rotates around its axis.

....

....

4.The earth revolves around the sun once every year.

....

....

Put (√) or (X),then correct the wrong one:

1-The sun doesn't rotate around the earth. ( )

2-The movement of shadow of any fixed object exposed to sunlight is due to the apparent movement of the sun. ( )

3-The day is nearly equal to night in summer and autumn seasons.( )

4-We see the sunrise and sunset due to rotation of earth around the sun. ( )

5-During the northern hemisphere winter, day and night are equal. ( )

6-During the southern hemisphere summer, the day is longer than night. ( )

7-The inclination of the earth's axis causes the difference in hours of day and night. ( )



Write the scientific term:

1-A phenomenon occurs when the earth rotates around its axis. (…………………..)

2-A phenomenon occurs when the earth rotates around the sun. (……………….)

3- A season in which day is longer than night. (……………………)

4- A season in which day is shorter than night. (…………………...)

5- Seasons in which hours of day are nearly equal to those of night.

(………………&……………………)



Exercise (1)

Question (1): complete the following:

1- The space occupied by a cube with one meter side equals ....
2- The earth completes its revolution around the sun in about .... day.
3- The phenomena of .... sequence results from the rotation of the earth around its axis, while the .... Sequence results from the revolution of the earth around the sun.
4- Silver is a shiny element, it belongs to the .... Group while Sulphur is an element having no luster so it belongs to .... group.
5- Melting ice of the two poles is a .... change.
6- The nearest planet to the sun is .... While .... Is the farthest planet to the sun.
7- Decreasing the temperature of a liquid change it from .... state to .... State.

Question (2): choose the correct answer:

1- the biggest planet in the solar system is .... (the earth – mercury – Jupiter – mars)

2- an example of non-metal is .... (iron – carbon – copper – aluminium)

3- the number of the planets in the solar system is .... (4 – 6 – 8 – 9)

4- changing of the matter from a gaseous state to a liquid one is ....

(solidification – condensation – evaporation – melting)

5- the cooking pots are made up of .... (graphite – aluminium – Sulphur – wood)

Question (3): write the scientific term:

1- Everything occupies a space and has a mass.
2- Shinning objects radiate light and heat and appears in the sky at night.
3- A layer of iron oxide forms on a piece of iron.
4- Dark object reflects the fallen sun rays on its surface.

Question (4): give the scientific reasons:

1- The moon is a dark object,but we see it shinny in the dark.

....

2- The shape of a piece of copper has definite shape when we carry it from a vessel to another one.

....

Question (5) match:

(A)	(B)
1- mercury	(a) is called the red planet
2- the earth	(b) the biggest planet
3- Jupiter	(c) The farthest planet from the sun
4- Neptune	(d) There are colored rings rotate around it
5- Mars	(e) First planet to the sun
	(f) Third planet to the sun

Question (6) give reasons:

1- Day and night sequence.

....

2- The sequence of the four seasons of the year.

....

Question (7): you have unknown element; how can you know is it metal or non-metal? Using two different methods.

....
....
....
....

Exercise (2)

Question (1): give reasons for each of the following:

1- Iron, copper and aluminium are good conductors of heat.

....

2- The day in summer season is longer than the day in winter.

....

3- If you get out a bottle full of water from refrigerator and leave it in the air, water drops are formed on its outer surface.

....

4- The graphite (carbon) is used in manufacturing of poles of dry cells.

....

5- Iron is used in manufacturing of bridges.

....

6- Uranus planet is named cold planet.

....

Question (2): choose the correct answer:

1- The measuring unit of volumes of solid objects is measuring by ....

(m – cm^3 – mm – all the previous)

2- Changing the matter from liquid state to solid state accompanied with ....

(an increase of heat – a decreasing in heat – stability(constancy) of heat – increase in mass)

3- From examples of physical change............

(burning of sugar – burning of coal – melting of ice – burning of wax)

4- The sequence of the four seasons of the year is occurred due to ....

(rotation of earth around its axis – rotation of earth around sun – rotation the moon around the earth – rotation the sun around its axis)

Question (3): correct the following sentences:

1- Graduated ruler is used to determine the volume of irregular small stone.

....

2- The mass of equal volumes of different material is equal.

....

3- Condensation is the change of matter from the liquid state to the slid state.

....

4- Metals are the simplest form that the matter found on it.

....

5- Adding table salt to water and stir it, the table salt disappears, and a new substance is formed.

....

6- The sun is a planet and it emits light.

....



Exercise (3)

Question (1): complete the following sentences:

1- Kilogram = ……………… Gram.
2- 1 liter = ………………… Milliliter.
3- The length can measure by some units as …………… or …………….
4- The transfer of matter from liquid state to gaseous state is called…………………….
5- Some element has metallic luster as …………………….
6- Dissolving sugar in water is a ………………… Change, while iron rust is a ………………. Change.
7- Copper and graphite are good conductors of ………………………….
8- Planets are ………………… bodies that revolve around the sun in a fixed orbits.
9- The earth's axis is inclined causing the difference between ……………………….
10- The solar system consists of eight ……………………
11- In the ………………… season, the day is shorter than the night.

Question (2): choose the correct answer:

1- Volume of cuboids = ……………………..
(length – width - height / length x width x height / length + width + height)
2- If your dimensions of your book are 5, 2 and 2 cm,so the volume of the book equals ……………… Cm^3 (20 – 15 – 10)
3- The volume of irregular shaped object is estimated by using a ……………………….
(graduated cylinder containing water – measuring ruler – common balance)
4- Electric wires are made up of …………………….. (sulphur – carbon – copper)
5- Water vapour is an example for ………………. state. (gaseous – liquid – solid)
6- From non-metal that found in liquid state at room temperature is ……………
(carbon – phosphorus – bromine)
7- On decreasing the temperature of water vapour, it …………………
(melts – freezes – condenses)
8- The central body of the solar system is the ………………… (earth – moon – sun)
9- The most beautiful planet in shape in the solar system is ……………………
(earth – Saturn – venus)



Question (3): write the scientific term:

1- Anything occupies a space and has a mass.
2- A unit used to measure the small masses.
3- The change that occur in the appearance of the matter without a change in its structure.
4- A change of matter from gaseous state to liquid state by cooling.
5- A change of matter from liquid state to solid state by cooling.
6- Elements that have luster and have the ability to conduct electricity.
7- Dark object reflects the sun rays that fall on its surface.
8- A planet called red planet.
9- One of the solar system planets and there are a coloured rings around it.

Question (4): put (√) and (x):

1- Sensitive balance is used to measure the mass of the jewels.
2- Chemical change is a change in the form of the substance only.
3- Carbon and Sulphur have no luster.
4- On rising up the temperature of a piece of wax it melt.
5- Freezing is a change of solid matter to liquid state.
6- On decreasing the temperature of the water vapour, it condensing.
7- Liquid matters have definite shapes and volumes.
8- The moon is a shinning star radiates light and heat.
9- The day in summer season is longer than the night.
10 - Hammering of iron is a chemical change.
11 The largest planet in the solar system is Uranus planet.

Question (5): correct the underlined words in the following statements.

1- The graduated ruler is used to measure the <u>mass</u>.
2- The <u>graduated tape</u> is used to measure the mass of fruits and vegetables.
3- All metals are solid elements in normal temperature except <u>bromine</u>, it is liquid element.
4- <u>Solids</u> are changing their shapes and volumes according to the containers.
5- <u>Sulphur</u> is non-metal element and good conductor to electricity.
6- In <u>winter and summer</u> seasons, the day hours are equal to the night hours.



Question (6): cross the odd word:

1- Aluminium – mercury – iron – Sulphur.
2- Bromine – iron – phosphorus – Sulphur.
3- Aluminium – mercury – iron – copper.
4- Carbon – bromine – phosphorus – Sulphur.
5- Earth – Jupiter – moon – Uranus.

Question (7): what is meant by:

1- Melting
....

2- Mass
....

3- Physical change
....

4- Chemical change.
....

5- Metal
....

Question (8): compare between:

1- Physical change and chemical change.

....	....
....	....



2- Metal and non-metal.

....	....
....	....

3- Sun and mars.

....	....
....	....

4- Earth and moon.

....	....
....	....

5- The sequence of the night and day phenomena and the sequence of the seasons.

....	....
....	....

Question (9): what happens when......?

1- Rising the temperature of a piece of ice.

....

2- You expose a shiny nail made of iron to wet air for a certain period.

....

3- Putting a glass full of water in the freezer for 24 hours.

....

4- Boiling of water and exposing the product to a cold surface.

....

Question (10): give reason for each of the following:

1- The poles of the dry cell are made of graphite.

....

2- Using copper in manufacturing of electric wires.

....

3- The sun seems bigger to us than the other stars.

....

4- The earth is a planet.

....

5- The sequence of the day and night.

....

6- The sequence of the four seasons.

....

Question (11): answer the following questions:

1- Complete the following table:
Sugar dissolving in water – wood burning – iron rusting – wax melting

Physical change	Chemical change
....	....

2- Arrange the following planets according to the nearest from the sun. (the nearest first)

Neptune – venus – Uranus – mars – earth – Saturn

....
....

Model exam (1)

1- Complete the following sentences:

a- Kilogram is a measuring unit of ....
b- The sequence of day and night is occurred due to rotation of .... Around its axis.
c- The nearest planet to the sun is ....
d- Burning of wood is considered as a .... change.

2- Put right and wrong:

a- Graduated tape is used in measuring volume
b- The sun is star because it emits heat only.
c- The biggest planet is mars.
d- Melting is the change of matter from solid state to liquid state.

3- Choose the correct answer:

a- From examples of physical change ....
(burning of sun – iron rusting – melting of salt in water)
b- .... Is used in measuring of the volume of an irregular shaped object.
(balance – graduated tape – graduated cylinder)
c- The cooking pots are made up of .... (aluminium – iron – plastic)
d- The changing of matter from the liquid state to the gaseous state is ....
(evaporation – freezing – condensation)

4- A- give reason for each of the following:

1- Although the moon is a dark body but we see it is shining.
....

2- The sequence of four seasons.
....

b- write the scientific term for each of the following:

1-dark bodies revolve around the sun in fixed orbits.
2- The change in the shape of the matter only not in its structure.
3- a tool that used in measuring of small masses.



Model exam (2)

1- Write the scientific term for each of the following:

a- The changing of matter from liquid state to gaseous state.

b- The center of the solar system.

c- The substances that have not definite volume and shape.

2- complete the following sentences:

a- The bodies that emit light and heat are ....

b- The ratio of the oxygen gas in the atmosphere is ....

c- Fruit rot is considered a .... Change.

d- Kilogram is the unit of measuring ....

e- The numbers of planes that rotate around the sun are ....

f- Ductility of copper into wires is considered as a .... Change.

3- Put right and wrong:

a- Melting is changing the matter from liquid state to solid state by heating.

b- The solid substances have definite shape and volume.

c- Iron rust is a chemical change.

4- Give reason for each of the following:

The sequence of the day and night.

....

5- What happen when.....?

1- Putting a bottle of water in the freezer.

....

2- Boiling of water and exposing the product to a cold surface.

....